

# Purchase Order Receipt Listing

Page 1 of 2

Monday, March 20, 2017 10:05:51 AM

All amounts are calculated in domestic currency.

All Vendors PO ID PO35541 Receipt Dates from 3/17/2017 to 3/17/2017 All Line Item Types  
All Item ID/GL/WOs All Rec. Employees All Currencies  
Grouped by Vendor ID

Purchase Order ID/ Curr Type	Line Nbr/ Insp Req	Project ID	Reference/ Description/ Cert Std	PO U/M / Stock U/M	Required Date Required Qty	Recv Date/ Recv Emp	Recv Qty (PO U/M)	Cost Per Unit/ Recv Value	Inspected Qty/ Rejected Qty (PO U/M)	MRB Qty/ MRB Reject Qty	Book Amt
<b>VendorID/Vendor Name VU-TWM001 TW Metals</b>											
PO35541	1		M304TR0.500W.035 f		3/17/2017	3/17/2017	60.0000		0.0000	0	\$0.00
USD	No		304 RD Tube .500 x f .035W m137086		60.0000	PLOU01			0.0000	0	
	2		M304TR0.500W.049 f		3/17/2017	3/17/2017	20.0000		0.0000	0	\$0.00
	No		304 RD Tube .500 x f .049W m137091	1x 20'	20.0000	PLOU01			0.0000	0	
	3		M304TR0.750W.049 f		3/17/2017	3/17/2017	80.0000		0.0000	0	\$0.00
	No		304 RD Tube .750 x f .049W m137091	4x 20'	80.0000	PLOU01			0.0000	0	
	4		M304TR1.000W.065 f		3/17/2017	3/17/2017	20.0000		0.0000	0	\$0.00
	No		304 RD Tube 1.00 x f .065W m137091	1x 20'	20.0000	PLOU01			0.0000	0	
	5		M4130NT0.750W.04 f		3/17/2017	3/17/2017	23.9170		0.0000	0	\$0.00
	No		4130 RD Tube .750 f x.049W m137091	1x 20'	20.0000	PLOU01			0.0000	0	
	6		M6061T6T0.500W.05 f		3/17/2017	3/17/2017	120.0000		0.0000	0	\$0.00
	No		6061-T6 RD Tube f .500 x.058W m137091	10x 12'	120.0000	PLOU01			0.0000	0	
	7		M6061T6T2.00W0.12 f		3/17/2017	3/17/2017	24.0000		0.0000	0	\$0.00
	No		6061T6 RD TUBE f 2.00 X.125W m137091	24' 2x	20.0000	PLOU01			0.0000	0	

Purchase Order ID/ Curr Type	Line Nbr/ Insp Req	Project ID	Reference/ Description/ Cert Std	PO U/M / Stock U/M	Required Date Required Qty	Recv Date/ Recv Emp	Recv Qty (PO U/M)	Cost Per Unit/ Recv Value	Inspected Qty/ Rejected Qty (PO U/M)	MRB Qty/ MRB Reject Qty	Book Amt
VendorID\Vendor Name		VU-TWM001	TW Metals								
PO35541	8		71401-45		3/17/2017	3/17/2017	1.0000		0.0000	0	\$0.00
USD	No		PROCUREMENT QUALITY CLAUSES m137091		1.0000	PLOU01			0.0000	0	
Total Received Quantity:											348.9170
Total Qty to Inspect (PO U/M):											0.0000
Total Reject Quantity:											0.0000
Total Receipt Value:											\$0.00
Total Balance Due Quantity:											0.0000



O'Neal High-Performance Metals Group



Packing  
Slip

ORDER NO.: 60627376

FROM: CRAN

PAGE 1

CUST NUMBER: 1203820 NET WGT: 87.950 REQ.DATE: 03/17/17 CONFIRMED  
SOLD TO: SHIP TO:  
DART AEROSPACE LTD DART AEROSPACE LTD  
1270 ABERDEEN ST 1270 ABERDEEN ST  
HAWKESBURY ON HAWKESBURY ON  
CANADA CN K6A 1K7 ONTARIO CANADA CN K6A 1K7

SALESPERSON: DONNA SMALLEY SHIP BY: 03/13/17  
TERMS: NET 30 DAYS VIA: COMMON CARRIER  
F.O.B.: SHIPPING POINT FREIGHT: PREPAID  
CUST ORD NO.: PO35541 RELEASE NO.:  
RECEIVING PHONE:

LINE ITEM DESCRIPTION WIDTH LENGTH  
0001 36506 SMLS CD 304/L A269 1/2 OD X .049 WA 20' ML

CLN#	ORD QTY	INVOICE QTY	SHIPPED QTY	WT
	20.000 FT	20.000 FT	20.000 FT	4.718

PCS  
1

\*\* 1 TEST REPORTS REQUIRED \*\*

\*\* 1 CERTS REQUIRED \*\*

ECCN: 2B999.g Export License: NLR Expiration Date: 0/00/00  
PO:49336439 HT:YX1506712 PC: 1 CUSTOMER QTY: 20.000 UOM FT  
MLT:CHINA MFG:CHINA SLB/CL:12-19

0002 36860 SMLS CD 304/L A269 3/4 OD X .049 WA 20' CL

CLN#	ORD QTY	INVOICE QTY	SHIPPED QTY	WT
	80.000 FT	80.000 FT	80.000 FT	29.338

PCS  
4

\*\* 1 TEST REPORTS REQUIRED \*\*

\*\* 1 CERTS REQUIRED \*\*

ECCN: 2B999.g Export License: NLR Expiration Date: 0/00/00  
PO:49342471 HT:YX1501783 PC: 4 CUSTOMER QTY: 80.000 UOM FT  
MLT:CHINA MFG:CHINA SLB/CL:11-63

0003 37076 SMLS CD 304/L A269 1 X .065 WA 20' CL

CLN#	ORD QTY	INVOICE QTY	SHIPPED QTY	WT
	20.000 FT	20.000 FT	20.000 FT	12.982

PCS  
1

\*\* 1 TEST REPORTS REQUIRED \*\*

\*\* 1 CERTS REQUIRED \*\*

ECCN: 2B999.g Export License: NLR Expiration Date: 0/00/00  
PO:49354086 HT:YX1606644 PC: 1 CUSTOMER QTY: 20.000 UOM FT  
MLT:CHINA MFG:CHINA SLB/CL:10-24

SA7-EB-20

1  
THANK YOU FOR THIS ORDER

TERMS AND CONDITIONS APPLICABLE TO THE SALE OF THESE  
PRODUCTS ARE SET FORTH ON OUR WEBSITE FOR YOUR CAREFUL  
REVIEW.  
<http://www.twmetals.com/invoice-terms.html>



O'Neal High-Performance Metals Group



# Packing Slip

ORDER NO.: 60627376

FROM: CRAN

PAGE 2

CUST NUMBER: 1203820 NET WGT: 87.950 REQ.DATE: 03/17/17 CONFIRMED  
SOLD TO: SHIP TO:  
DART AEROSPACE LTD DART AEROSPACE LTD  
1270 ABERDEEN ST 1270 ABERDEEN ST  
HAWKESBURY ON HAWKESBURY ON  
CANADA CN K6A 1K7 ONTARIO CANADA CN K6A 1K7

SALESPERSON: DONNA SMALLEY SHIP BY: 03/13/17  
TERMS: NET 30 DAYS VIA: COMMON CARRIER  
F.O.B.: SHIPPING POINT FREIGHT: PREPAID  
CUST ORD NO.: PO35541 RELEASE NO.:  
RECEIVING PHONE:

LINE	ITEM DESCRIPTION	WIDTH	LENGTH
0004	33047 CDS 4130 6736	3/4 X .049	17/24 FT

CLN#	ORD QTY	INVOICE QTY	SHIPPED QTY	WT
	20.000 FT	23.917 FT	23.917 FT	8.771

PCS  
1

\*\* 1 TEST REPORTS REQUIRED \*\*

\*\* 1 CERTS REQUIRED \*\*

ECCN: 9A991.d Export License: NLR Expiration Date: 0/00/00  
PO:49353474 HT:598618 PC: 1 CUSTOMER QTY: 23.917 UOM FT  
MLT:GERMANY MFG:GERMANY SLB/CL:1625993

CLN#	ORD QTY	INVOICE QTY	SHIPPED QTY	WT
0005	42276 D6061-T6 1/2 OD X .058 WA		12 FT ML	

CLN#	ORD QTY	INVOICE QTY	SHIPPED QTY	WT
	120.000 FT	120.000 FT	120.000 FT	11.362

PCS  
10

\*\* 1 TEST REPORTS REQUIRED \*\*

\*\* 1 CERTS REQUIRED \*\*

ECCN: EAR99 Export License: NLR Expiration Date: 0/00/00  
PO:49342317 HT:35361464 PC: 10 CUSTOMER QTY: 120.000 UOM FT  
MLT:UNITED STATES MFG:UNITED STATES SLB/CL:324203

CLN#	ORD QTY	INVOICE QTY	SHIPPED QTY	WT
0006	44622 D6061-T6 2 OD X .125 WA		12 FT ML	

CLN#	ORD QTY	INVOICE QTY	SHIPPED QTY	WT
	20.000 FT	24.000 FT	24.000 FT	20.779

PCS  
2

\*\* 1 TEST REPORTS REQUIRED \*\*

\*\* 1 CERTS REQUIRED \*\*

ECCN: EAR99 Export License: NLR Expiration Date: 0/00/00  
PO:49357071 HT:1402994 PC: 2 CUSTOMER QTY: 24.000 UOM FT  
MLT:GERMANY MFG:GERMANY SLB/CL:62126/100

## THANK YOU FOR THIS ORDER

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O'Neal High-Performance Metals Group



# Packing Slip

ORDER NO.: 60627376

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PAGE 3

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SOLD TO:	SHIP TO:		
DART AEROSPACE LTD	DART AEROSPACE LTD		
1270 ABERDEEN ST	1270 ABERDEEN ST		
HAWKESBURY ON	HAWKESBURY ON		
CANADA	CN K6A 1K7	ONTARIO CANADA	CN K6A 1K7

SALESPERSON: DONNA SMALLEY	SHIP BY: 03/13/17
TERMS: NET 30 DAYS	VIA: COMMON CARRIER
F.O.B.: SHIPPING POINT	FREIGHT: PREPAID
CUST ORD NO.: PO35541	RELEASE NO.:
	RECEIVING PHONE:

LINE	ITEM DESCRIPTION	WIDTH	LENGTH
BROKERS	KUEHNE AND NAGEL LTD		

-----		PACK INFO -----				
AREA	TYPE OF PKG	PKGS	GRS WEIGHT	WIDTH	LENGTH	HGHT
B	REDDICRATE	1.000	126.000		24.5000	
		1.000	126.000			

BY: TW  
RT 000-

UNLOAD TYPE: NONE SPECIFIED

*8/17/20*

DATE SHIPPED \_\_\_\_\_

DATE FILLED \_\_\_\_\_

**THANK YOU FOR THIS ORDER**

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ORDER NO.: 60627376

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SOLD TO: SHIP TO:  
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1270 ABERDEEN ST 1270 ABERDEEN ST  
HAWKESBURY ON HAWKESBURY ON  
CANADA CN K6A 1K7 ONTARIO CANADA CN K6A 1K7  
  
SALESPERSON: DONNA SMALLEY SHIP BY: 03/13/17  
TERMS: NET 30 DAYS 27 ENGLEHARD DRIVE  
F.O.B.: SHIPPING POINT MONROE TWP NJ 08831  
CUST ORD NO.: PO35541  
VIA: COMMON CARRIER  
FREIGHT: PREPAID  
RELEASE NO.:  
RECEIVING PHONE:

"TW Metals MSDS data is available on our web site at [www.twmetals.com](http://www.twmetals.com). MSDS data can be found under the Technical Resources Tab, Product Statistics & Data and the TW Metals MSDS's heading. If you do not have web site access you may telephone 610-458-1300 and we will mail or fax a copy of our current MSDS data to your location."

"CERTIFICATE OF CONFORMANCE"

"TW Metals certifies that the material supplied on this purchase order and contained in the heat/lot number referenced above has been manufactured, inspected, and tested in accordance with the material specification. These records are on file at TW Metals. Packaging material for shipments to Europe and China consists of manufactured wood products and complies with the European emergency measures for coniferous non-manufactured wood packing material"

Authorized Test Report Clerk Cgm [signature]

Date: 3/13/17

These commodities have been exported from the United States in accordance with the U.S. export control laws, export administrations regulations. Diversion contrary to U.S. law prohibited.

1  
**THANK YOU FOR THIS ORDER**

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PUFA™

Producer of Premium Stainless Steel Seamless Tubes

## MILL TEST REPORT

Purchaser.: TW METALS-Carol Stream					Certificate No.: 16-1-92				
Contract No.: TWM P.O.No.: M49336439					Date of Issue.: 2016.1.5				
Commodity: Stainless Steel Seamless Tubes			Specifications: ASTM A213-15c/ASME SA213-15/ASTM A269-15a EAW						
Process: Cold Drawn			Delivery Condition: OD Polished to 240 Grit						
Steel Grade	Heat Number	Lot Number	Dimensions	Quantity					
				Pieces	Feet				
TP304/TP304L	YX1506-712	12-19	1/2" x 0.049" x 20'	2300	46,000				
Chemical Composition by Weight (%)									
Element	C	Mn	P	S	Si	Cr	Ni	Mo	Co
Requirements	≤0.035	≤2.00	≤0.045	≤0.030	≤1.00	18.00-20.00	8.00-12.00	-	-
Ladle Analysis	0.013	0.65	0.032	0.002	0.32	18.28	8.05	-	-
Product Analysis	0.017	0.61	0.033	0.002	0.28	18.31	8.55	-	-
Mechanical Properties									
Test Item	Elongation (% in 2")	Tensile Strength (PSI) Rm		Yield Strength (PSI) Rp / 0.2%					
Requirements	≥35	≥75,000		≥30,000					
Test Results	63/64	97,000/98,000		43,000/44,000					
Test Item	Reduction of Area Z (%)	Hardness	Cold Bend Test	Flaring Test	Flattening Test	Flange Test	P.M.I. Test		
Requirements	-	HRB≤80	-	22%	e=0.09	-	-		
Test Results	-	77/79	-	Passed	Passed	-	OK		
Test Item	Eddy Current Test	Air Underwater Pressure Test	Ultrasonic Test	Intergranular Corrosion Test	Macroscopic Inspection				
Requirements	ASTM E 426	-	-	ASTM A262 E	End Cut	Appearance			
Test Results	Passed	-	-	OK	OK	OK			

ISO 9001:2008 Certified by Intertek 110703068

PED Certified by SZUTEST 2195-PED-1526002

## Additional Remarks:

- (1) All tubes annealed to above 1900 Deg F and water quenched below 800 Deg F in 3 minutes
- (2) All tubes tested per ASTM A1016-14
- (3) Materials is NACE MR0103-2007 compliant (per Section 2.5)
- (4) Materials is NACE MR0175/ISO 15156-2003 compliant (per Section 4.2.1)
- (5) In Compliance with EN 10204-3.1
- (6) In Compliance with RoHS Stipulation
- (7) No weld repair performed
- (8) Free from mercury contamination
- (9) Free from radioactive contamination
- (10) Billets melt and pipes/tubes manufactured in China
- (11) All tubes 100% PMI tested
- (12) All tubes 100% Eddy Current tested

**CANNOT CERTIFY COMPLIANCE**  
**FAR BAA / DFARS BAA / FAR TAA**

By:

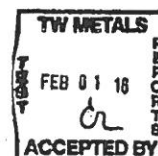


James Shi

James Shi / Manager  
 Quality Control Department

We hereby certify that this report is true and correct.

**Shanghai Pufa Stainless Steel Pipe Factory**  
 No. 59, Shuangye Road, Wanggang, New Pudong District, Shanghai, China



w

## MILL TEST REPORT

Purchaser.: TW METALS-Cranbury				Certificate No.: 16-1-13					
Contract No.: TWM P.O.No.: M49342471				Date of Issue.: 2016.1.5					
Commodity: Stainless Steel Seamless Tubes				Specifications: ASTM A213-15c/ASME SA213-15/ASTM A269-15a EAW					
Process: Cold Drawn				Delivery Condition: OD Polished to 240 Grit					
Steel Grade	Heat Number	Lot Number	Dimensions	Quantity					
				Pieces	Feet				
TP304/TP304L	YX1501-783	11-63	3/4" x 0.049" x 20'	250	5,000				
Chemical Composition by Weight (%)									
Element	C	Mn	P	S	Si	Cr	Ni	Mo	Co
Requirements	≤0.035	≤2.00	≤0.045	≤0.030	≤1.00	18.00-20.00	8.00-12.00	-	-
Ladle Analysis	0.012	0.68	0.031	0.001	0.37	18.35	8.05	-	-
Product Analysis	0.019	0.70	0.033	0.002	0.39	18.37	8.31	-	-
Mechanical Properties									
Test Item	Elongation (% in 2")	Tensile Strength (PSI) Rm		Yield Strength (PSI) Rp / 0.2%					
Requirements	≥35	≥75,000		≥30,000					
Test Results	65/66	89,000/90,000		34,000/35,000					
Test Item	Reduction of Area Z (%)	Hardness	Cold Bend Test	Flaring Test	Flattening Test	Flange Test	P.M.I. Test		
Requirements	-	HRB≤80	-	22%	e=0.09	-	-		
Test Results	-	75/77	-	Passed	Passed	-	OK		
Test Item	Eddy Current Test	Air Underwater Pressure Test	Ultrasonic Test	Intergranular Corrosion Test	Macroscopic Inspection				
Requirements	ASTM E 426	-	-	ASTM A262 E	End Cut	Appearance			
Test Results	Passed	-	-	OK	OK	OK			

ISO 9001:2008 Certified by Intertek 110703068

PED Certified by SZUTEST 2195-PED-1526002

## Additional Remarks:

- (1) All tubes annealed to above 1900 Deg F and water quenched below 800 Deg F in 3 minutes
- (2) All tubes tested per ASTM A1016-14
- (3) Materials is NACE MR0103-2007 compliant (per Section 2.5)
- (4) Materials is NACE MR0175/ISO 15156-2003 compliant (per Section 4.2.1)
- (5) In Compliance with EN 10204-3.1
- (6) In Compliance with RoHS Stipulation
- (7) No weld repair performed
- (8) Free from mercury contamination
- (9) Free from radioactive contamination
- (10) Billets melt and pipes/tubes manufactured in China
- (11) All tubes 100% PMI tested
- (12) All tubes 100% Eddy Current tested

**CANNOT CERTIFY COMPLIANCE  
FAR BAA / DFARS BAA / FAR TAA**



By:

James Shi

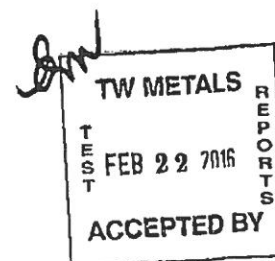
James Shi / Manager

Quality Control Department

We hereby certify that this report is true and correct.

Shanghai Pufa Stainless Steel Pipe Factory

No. 59, Shuangye Road, Wanggang, New Pudong District, Shanghai, China



## MILL TEST REPORT

Purchaser.: TW METALS-Cranbury				Certificate No.: 2016-12-103					
Contract No.: TWMP.O.No.: M49354086				Date of Issue.: 2016.12.17					
Commodity: Stainless Steel Seamless Tubes		Specifications: ASTM A213-15c/ASME SA213-15/ASTM A269-15a EAW							
Process: Cold Drawn				Delivery Condition: OD Polished to 240 Grit					
Steel Grade	Heat Number	Lot Number	Dimensions		Quantity				
					Pieces	Feet			
TP304/TP304L	YX1606-644	10-24	1"x0.065"x20'		200	4,000			
Chemical Composition by Weight (%)									
Element	C	Mn	P	S	Si	Cr	Ni	Mo	Co
Requirements	≤0.035	≤2.00	≤0.045	≤0.030	≤1.00	18.00-20.00	8.00-12.00	-	-
Ladle Analysis	0.023	1.28	0.031	0.002	0.33	18.21	8.05	-	-
Product Analysis	0.021	1.26	0.028	0.008	0.32	18.40	8.49	-	-
Mechanical Properties									
Test Item	Elongation (% in 2")		Tensile Strength (PSI) Rm			Yield Strength (PSI) Rp / 0.2%			
Requirements	≥35		≥75,000			≥30,000			
Test Results	63/64		94,000/95,000			39,000/40,000			
Test Item	Reduction of Area Z (%)	Hardness	Cold Bend Test	Flaring Test	Flattening Test	Flange Test	P.M.I. Test		
Requirements	-	HRB≤80	-	22%	e=0.09	-	-		
Test Results	-	76/78	-	Passed	Passed	-	OK		
Test Item	Eddy Current Test	Air Underwater Pressure Test	Ultrasonic Test	Intergranular Corrosion Test	Macroscopic Inspection				
Requirements	ASTM E 426	-	-	ASTM A262 E	End Cut	Appearance			
Test Results	Passed	-	-	OK	OK	OK			

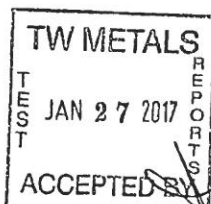
ISO 9001:2008 Certified by CAS 117 16 QU 0053-06 ROS

PED Certified by SZUTEST 2195-PED-1526002

## Additional Remarks:

- (1) All tubes annealed to above 1900 Deg F and water quenched below 800 Deg F in 3 minutes
- (2) All tubes tested per ASTM A1016-14
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- (11) All tubes 100% PMI tested
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**CANNOT CERTIFY COMPLIANCE  
FAR BAA / DFARS BAA / FAR TAA**



By:



James Shi

James Shi / Manager

Quality Control Department

We hereby certify that this report is true and correct.

Jiangsu Pufa Stainless Steel Tube Co., Ltd.

No. 99, Xuean Middle Road, Dongchen Town, Rugao City, Jiangsu Province, P.R.China

Benteler Steel/Tube GmbH  
Postfach 13 40  
33043 Paderborn  
Deutschland  
Tel.: +49.5254.81-0 Fax: +49.5254.13666

**BENTELER**   
Steel/Tube

**ABNAHMEPRÜFZEUGNIS EN 10204-3.1**  
**INSPECTION CERTIFICATE EN 10204-3.1**  
**CERTIFICAT DE RECEPTION EN 10204-3.1**  
EN 10204:2005-01

Benteler Steel/Tube GmbH - Postfach 1340 - 33043 Paderborn - Deutschland

TW Metals  
The Aboretum, Suite 204  
760 Constitution Drive  
EXTON PA 19341  
USA

Dokument-Nr.: 41-961797/001/P  
Document No.:  
No. du document:

Kunden-Bestell-Nr.: 46004384 TW M49353474  
Purchase Order No.:  
No. de commande du client:

Benteler Auftrags-Nr.: 1625993  
Benteler Order No.:  
No. de commande Benteler:

Versandanzeigen-Nr.: 4170922  
Dispatch Note No.:  
No. d'avis d'expédition:

Produkt: NAHTLOSE STAHLROHRE  
Product: SEAMLESS STEEL TUBES  
Produit: TUBES D'ACIER SANS SOUDURE

Prüf-Nr.:  
Inspection No.:  
No. du certificat:

Hersteller: Warmrohrwerk/Zieherei  
Manufacturer: [DIN EN ISO 9001, ISO/TS-16949 CERTIFIED BY TUEV NORD CERT]  
Producteur: [PED 2014/68/EU CERTIFIED BY TUEV NORD SYSTEMS]

Herstellerzeichen:  
Manufacturer's brand:  
Marque du producteur:

Stempel des Abnahmebeauftragten: WA  
Stamp of the inspection representative:  
Poinçon du contrôleur:

Stahlschmelzungsverfahren: ELEKTROSTAHL  
Steelmaking process: ELECTRIC FURNACE  
Procédé d'élaboration de l'acier: FOUR ELECTRIQUE

Blatt: 1 / 4  
Page:  
Page:

Lieferbedingungen: AMS-T-6736B Type 1, ASTM-A 519-2006, MIL-T-6736B Type 1, AMS6360 Rev. M, AMS 2301K

Terms of delivery:

Conditions de livraison:

Maße - Toleranzen: AMS 2253E-83, Aircraft Type, Seamless, Cold Finished

Dimensions-tolerances:

Dimensions-tolérances:

Stahlsorte: GRADE 4130

Steel grade:

Nuance d'acier:

Lieferzustand: Condition N

Delivery condition:

État de livraison:

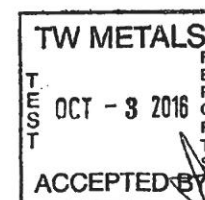
Produktkennzeichnung: FSD: BENTELER AMS6360M-AMS-T-6736 B 1-MIL-T-6736 B 1-AMS 2301K 4130 Condition N HEAT-NO.

Product marking:

CD AQ S DIMENSIONS WA GERMANY

Marquage du produit:

AEZ = Ätztintenbeschriftung, Etching ink marking, Gravure à l'encre . FK = Farbkennzeichnung, color marking, marquage par couleur . FS = Farbschablonierung, paint stencilling, marquage par peinture . FSD = Farbstrahlprüfer, Color jet printer, Imprimante à jet d'encre de couleur . LK = Laserkennzeichnung, Laser marking, Marquage laser . PKE = Etikettenkennzeichnung, tag marking, marquage sur étiquette . PS = Prägestempel, die stamp, marquage par poinçonnage . TS = Tintenstrahlkennzeichnung, Ink jet spray marking, Imprimante à jet d'encre .





Benteler Steel/Tube GmbH  
Postfach 13 40  
33043 Paderborn  
Deutschland  
Tel.: +49.5254.81-0 Fax: +49.5254.13866

**BENTELER**   
Steel/Tube

**ABNAHMEPRÜFZEUGNIS EN 10204-3.1**  
INSPECTION CERTIFICATE EN 10204-3.1  
CERTIFICAT DE RECEPTION EN 10204-3.1

Dokument-Nr.: 41-961797/001/P  
Document No.:  
No. du document:

Prüf-Nr.:  
Inspection No.:  
No. du certificat:

Blatt: 2 / 4  
Page:  
Page:

Pos.	Stück	Maße	Gesamtlänge	Gewicht	Schmelzen-Nr.	Prüfdruck	Rohr-Nr.-Gruppe	Vielfachlängen
Item	Number	Dimensions	Length total	Weight	Heat No.	Test pressure	Tube number group	Multiple lengths
Poste	Nombre	Dimensions	Longueur totale	Poids	No. de coulée	Pression d'épreuve	Série de no. des tubes	Longueurs multiples
		feet	feet	lbs				
0003	154	0.750" O.D. * 0.049" WT 20 FT - 24 FT	3688,32	1345	598618			

Schmelzenanalyse [%] / Heat analysis [%] / Analyse sur coulée [%]

Pos.	Schmelzen-Nr.	C	SI	MN	P	S	CR	MO	NI	CU
Item	Heat No.									
Poste	No. de coulée									
0003	598618	0,310	0,260	0,54	0,010	0,001	0,88	0,17	0,14	0,17

Produktanalyse [%] / Product analysis [%] / Analyse sur produit [%]

Pos.	Schmelzen-Nr.	C	SI	MN	P	S	CR	MO	NI	CU
Item	Heat No.									
Poste	No. de coulée									
0003	598618	0,310	0,280	0,52	0,009	0,001	0,89	0,17	0,12	0,15

Prüfergebnisse / Test results / Résultats des essais

Die Rohre wurden zerstörungsfrei geprüft: The tubes are non destructive tested: Les tubes ont passé un essai non destructif:	ET-test: acc. to ASTM-A 450; ET - Test method: acc. to ASTM-E 309; for imperfections; ET-test: ET with rotating pancake coils; according to EN 10246-3; imperfections; Notch depth: 0,30 mm; notch width < = notch depth; notch length min. 2 x transducer width (max. 50 mm)	PASSED
Augensichtkontrolle: Visual inspection: Examen visuel:	Materiaverwechslungsprüfung: Material conformity test: Vérification de la nuance:	PASSED
	Maßkontrolle: Dimensions examination: Vérification des dimensions:	PASSED

Ergebnisse der mechanischen Prüfung / Results of mechanical testing / Résultats des essais mécaniques

Die Probennahme erfolgte an Vielfachlängen.  
The sampling was carried out on multiple lengths.  
L'échantillonnage était réalisé aux longueurs multiples.

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**BENTELER**   
Steel/Tube

**ABNAHMEPRÜFZEUGNIS EN 10204-3.1**  
INSPECTION CERTIFICATE EN 10204-3.1  
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Dokument-Nr.: 41-961797/001/P  
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No. du certificat:

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Page:

Zugversuch-längs bei RT; Vollprobe / Tensile test longitudinal at RT, Full section test specimen / Essai de traction longitudinale à TA, Eprouvette a section complete

Pos. Item Poste	Proben-Nr. Specimen No. No. de l'éprouv.	Schmelzen-Nr. Heat No. No. de coulée	Probenabmessung Specimen dimensions Dimensions de l'éprouv.	Streckgrenze Yield strength Limite élastique	Zugfestigkeit Tensile strength Résistance à la traction	Dehnung Elongation Allongement	
Anforderungen Requirements Exigences			mm	Rp 0,2 % KSI MIN 75	Rm KSI MIN 95	A2" % MIN 12.00	1. Formel 1. Formula 1. Formule
0003	000001	598618	19,05 X 1,25	120	128	18,00	
0003	000002	598618	19,05 X 1,25	120	128	18,00	
0003	000003	598618	19,05 X 1,25	118	127	18,00	
0003	000004	598618	19,05 X 1,25	120	128	18,00	
0003	000005	598618	19,05 X 1,25	118	128	18,00	

Randentkohlung / Surface decarburization / Décarburation superficielle

Pos. / Item / Poste: 0003  
acc. to AMS-6360, partial decarburization outside max. 0.009 in, partial decarburization inside max. 0.009 in, partial decarburization outside and inside max. 0.012 in, partial decarburization outside and inside max. 0,305 mm, without total decarburization; partial decarb. out. max.: 0,229 mm; partial decarb. ins. max.: 0,229 mm

Vermerk / Remark / Remarque

Pos. / Item / Poste: 0003  
Certificate remarks: The steel grade corresponds to MIL-T-6736B, AMS 6360M, material free from mercury contamination, FAR BAA: 52.225-1 CANNOT COMPLY, DFARS BAA: 252.225-7001 CAN COMPLY, FAR TAA: 52.225-5 CAN COMPLY, No weld repair has been carried out, Country of origin of the material and heat: Germany, Aircraft quality steel acc. to AMS 2301K; see appendix page 1 of 1

Pos. / Item / Poste: 0003  
Macroscopic examination: acc. to ASTM-E 381

Pos. / Item / Poste: 0003  
Magnetic particle inspec.: acc. to AMS 2301K/ASTM-E 1444, on prematerial

Pos. / Item / Poste: 0003  
Grain size: acc. to ASTM-E 112; Grain size and finer: 5; Grain size: Longitudinal structure micrography, On prematerial

Verkäufer(in) / Sales Personnel / Personne chargée : Mr Schwarz, Tel.: 05254 81-204311, Fax: 204391



Benteler Steel/Tube GmbH  
Postfach 13 40  
33043 Paderborn  
Deutschland  
Tel.: +49.5254.81-0 Fax: +49.5254.13666

**BENTELER**   
Steel/Tube

**ABNAHMEPRÜFZEUGNIS EN 10204-3.1**  
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41-961797/001/P

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Blatt: 4 / 4  
Page:  
Page:

Paderborn Schloß Neuhaus, 19.09.2016, TEL.: 05254.81-201765 FAX: 05254.81-201752

Abnahmebeauftragter  
Inspection representative  
Contrôleur

i.A. THOMAS GOLLAN / GUT

Es wird bestätigt, daß die gelieferten Erzeugnisse den techn. Lieferbedingungen des Auftrages entsprechen. Dieses Dokument wurde mittels EDV erstellt und ist ohne Unterschrift rechtsgültig.  
We certify that the supplied products comply with the order specification. This document was prepared by means of electronic data processing and is valid without signature.  
Nous attestons que les produits livrés sont conformes aux stipulations de la commande. Ce document a été établi par traitement électronique de l'information et est valide sans signature.

Benteler Steel/Tube GmbH  
Residenzstraße 1  
33104 Paderborn  
Germany  
Tel.: 49.5254.81-0 Fax: 49.5254.13666

**BENTELER**   
Steel/Tube

Abnahmeprüfzeugnis EN 10204-3.1 / Anhang  
**Inspection Certificate EN 10204.3.1 / appendix**  
Certificat de réception EN 10204-3.1 / appendice

Dokument-Nr.  
**Document No.:** 41-961797/001/P  
No. de document:

Blatt: von  
**Page:** 1 of 1  
Page: de.

Halbzeuguntersuchung: Stahlsorte 4130 / **Semi finished product examination: grade 4130** / Produit semi-fini: nuance 4130

Schmelzen-Nr. Heat No. Coulée No.	Position Item Poste	Korngröße Grain size Gros seur de grain (ASTM-E 112)	Härtbarkeit (min. Anforderungen) Hardenability (min. requirements) Trem pabilité (exigence min.) (ASTM-A 255)		Magnetpulverprüfung Magnetic particle inspection Essai à la poudre magnétique (AMS 2301K)		Makroätzung Macrostructure test Essai de macrostructure (ASTM-E 381)		
		min. 5	J(5/16") min. 35 HRC	J(8/16") min. 28 HRC	F max. 0,34	S max. 0,25	max. S 2	max. R 1	max. C 2
598618	003	9	42	34	0,029	0,024	S 2	R 1	C 2
Decarburization Depth		Outside 0,000 mm	Inside 0,000 mm						

**BENTELER**   
Steel/Tube GmbH

Der Stahl ist frei von Quecksilberverunreinigungen. / **The steel is free of mercury contamination.** / L'acier est libre des contaminations de mercure.

Paderborn Schloß Neuhaus, 21.09.2016  
Tel.: (0)5254.81-201760 Fax: (0)5254.81-201752

Abnahmebeauftragter  
**Inspection representative**  
Contrôleur

Thomas Gollan



PRECISION TUBE CO.  
287 WISSAHICKON AVE.  
NORTH WALES PA 19454

Control No: 171317

**CERTIFIED TEST REPORT**

CUSTOMER PURCHASE, ORDER NO.	CUST. ORD. NO.	PRECISION TUBE P/N
49342317 LINE 001	324203	24A050000580003

**SOLD:** TW METALS  
**TO** 235 TUBEWAY  
CAROL STREAM, IL 60188  
UNITED STATES

**SHIP:** TW METALS  
**TO** 235 TUBEWAY  
CAROL STREAM, IL 60188  
UNITED STATES

QUANTITY ORD.	DESCRIPTION	QTY. SHIPPED	DATE SHIPPED
3336 FT	METAL - 6061 ALUM TEMPER - T6 SPEC - AMS 4082P WW-T-700/6F AM 2 AMS-WW-T-700/6B ASTM-B-210-12 LENGTH - 12 FT LGTH TOL +.1250 IN -.0000 IN SHAPE - ROUND FINISH - STRAIGHT EXACT LENGTHS OD .5000 +.0030 -.0030 ID WALL .0580 +.0040 -.0040	3528 FT	01/20/16

TW METALS  
JAN 22 16  
ACCEPTED BY

**MECHANICAL PROPERTIES**

SAMPLE #	TENSILE STRENGTH (P.S.I.)	YIELD STRENGTH (P.S.I.)	ELONGATION IN 2 INCHES (%)	ROCKWELL HARDNESS	AVERAGE GRAIN SIZE (MM.)
1	45,602	41,239	17		

**DESTRUCTIVE TESTS**

Comments: FAR BAA COMPLIES, DFARS BAA COMPLIES, FAR TAA COMPLIES

**NON-DESTRUCTIVE TESTS**

EDDY CURRENT: PASS

**CHEMICAL COMPOSITION**

ALLOY: 6061 HEAT: TRACEABILITY #: 35361464  
RAW MATL VENDOR: PT56438 - Kaiser Aluminum

	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Al
Min	0.40		0.15		0.80	0.04			Rem.
Max	0.80	0.70	0.40	0.15	1.20	0.35	0.25	0.15	

OTHER ELEMENTS: 0.05 MAX EACH / 0.15 MAX TOTAL

We hereby certify that the material has been manufactured and tested in accordance with the requirements of the applicable specifications and descriptions set forth on Precision Tube's sales acknowledgement. During the manufacturing, testing, and inspection, the product did not come into direct contact with mercury or any of its compounds, nor with any mercury containing device employing a single boundary containment. Test results indicate that the material is compliant with the current revision of the RoHS Directive (2011/65/EU).

Manufactured in the USA  
QMS Registered to ISO 9001: 2008

By:

Art Onalits  
QA Manager

01/20/16

Page: 1 of 1

nb

# KAISER ALUMINUM FABRICATED PRODUCTS

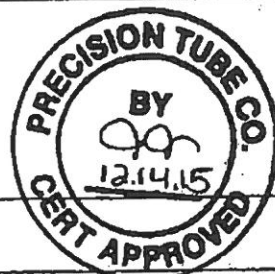
*Best in Class*

## CERTIFIED TEST REPORT

<http://Online.KaiserAluminum.com>

KAISER ALUMINUM  
FABRICATED PRODUCTS, LLC  
2425 STEVENS DRIVE  
RICHLAND, WA 99352

CUSTOMER PO NUMBER: <b>PT56438</b>		CUSTOMER PART NUMBER: <b>SPIRIT-371850</b>		PRODUCT DESCRIPTION: <b>5.400 LB/PC .600 LB/-0 LB 1.312 OD X .085 WALL ESRT</b>	
KAISER ORDER NUMBER: <b>319575</b>	LINE ITEM: <b>001</b>	SHIP DATE: <b>12/11/2015</b>	KAISER LOT NUMBER: <b>50751-312</b>	ALLOY: <b>6061</b>	TEMPER: <b>O</b>
WEIGHT SHIPPED: <b>4046.000 LB</b>	QUANTITY: <b>728.000 PCS</b>	B/L NUMBER: <b>004904</b>	DIAM/DAF/THICKNS: <b></b>	WIDTH: <b></b>	LENGTH: <b>13.984 FT</b>
SHIP TO:  <b>PRECISION TUBE CO 287 WISSAHICKON AVENUE N. WALES, PA 19454 USA</b>			SOLD TO:  <b>MUELLER INDUSTRIES, INC PRECISION TUBE 8285 TOURNAMENT DRIVE STE. 150 MEMPHIS, TN 38125 USA</b>		



### Actual Physical Properties

REFERENCE	DASH#	SAMPLE#	UTS(KSI)	YTS(KSI)	%Elong in 2	HARDNESS	CONDUCT.	BEND
50751-312	0001	0002	18.0	5.6	28.5	NA N/A	N/A	N/A
50751-312	0001	0003	18.4	5.3	28.0	NA N/A	N/A	N/A
50751-312	0001	0004	18.4	5.7	27.6	NA N/A	N/A	N/A
50751-312	0001	0005	17.7	5.1	27.2	NA N/A	N/A	N/A

### Chemical Composition (wt%), Aluminum Remainder

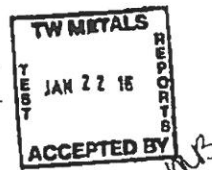
LIMITS	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Bi	Zr	Ea	Tot
Maximum	0.80	0.70	0.40	0.15	1.20	0.35	0.25	0.15	NA	NA	NA	0.05	.15
Minimum	0.40	0.00	0.15	0.00	0.80	0.04	0.00	0.00	NA	NA	NA	0.00	.0
F75382	.58	.35	.22	.05	.98	.09	.06	.03	.00	.00	.00	.01	.02
F82351	.61	.30	.26	.05	1.03	.08	.05	.02	.00	.00	.00	.01	.02

### Applicable Requirements:

ASTM-B241-12 NON-STENCILED ASTM-B221-13 ASTM-B345-11 AMS-QQ-A-200/8 97(R07) TYPE I  
UNS#A96061 Also conforms to EN 10204 3.1

### Miscellaneous Notes

MANUFACTURED IN USA MELTED IN USA  
MERCURY IS NOT A NORMAL BACKGROUND ELEMENT IN ALUMINUM ALLOYS. NEITHER MERCURY NOR ANY OF ITS COMPOUNDS ARE UTILITZED BY KAISER ALUMINUM IN THE MANUFACTURE OF THIS MATERIAL.



Plant Serial: 00013235  
Kaiser Order Number: 319575  
Line Item: 001

**KAISER**  
**ALUMINUM**  
**FABRICATED PRODUCTS**

*Best in Class*

**CERTIFIED TEST REPORT**

<http://Online.KaiserAluminum.com>

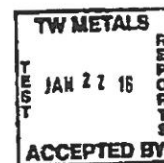
KAISER ALUMINUM  
FABRICATED PRODUCTS, LLC  
2425 STEVENS DRIVE  
RICHLAND, WA 99352

**CERTIFICATION**

Kaiser Aluminum Fabricated Products, LLC hereby certifies that metal shipped under this order has been inspected and tested and found in conformance with applicable specifications forming a part of the description set forth in Kaiser's sales acknowledgement form. Any warranty is limited to that shown on Kaiser's general terms and conditions of sale. Test reports are on file, subject to examination.

JOSEPH AMES, QUALITY MANAGER

*Jph*



Plant Serial: 00013235  
Kaiser Order Number: 319575  
Line Item: 001

# Abnahmeprüfzeugnis 3.1 - DIN EN 10204:2005



Inspection Certificate 3.1 - DIN EN 10204:2005 / Certificat de Reception 3.1- DIN EN 10204:2005

**Kunde:** TW Metals (PA)  
**Client:** 760 Constitution Drive P.O. Box 644  
 19341 - 06-EXTON, PA USA

**Zeugnisnummer:** 1455/16  
**Cert No. / No. du certificat:**  
**Bestellnummer:** M 49357071  
**Order No. / No. de commande**

**Produkt:** Rohre nahtlos gepresst und gezogen  
**Product / Produit:** Tubes seamless extruded and drawn  
**Spezifikation:** AMS - WW - T - 700/6C; AMS 4082P; ASTM B 210-12; WW-T-700/6F; -  
**Specification:**

**ALUnna Auftragsbest.-Nr.:** 62126/100  
**ALUnna Conf.-No. / conf. de commande:**

**Werkstoff:** 6061  
**Alloy/Alliage:**  
**Abmessung:** 2,000 INCH x 1,750 INCH x 0,125 INCH  
**Size / Dimension:** 44622

**Zustand:** T 6  
**Temper/Etat**

**Kennzeichnung:** ALUnna - Cert No. 1455/16 - 6061-T6 - CAST NO. 5625-2- WW-T-700/6(F) -AMS-WW-T-700/6 (C) - AMS 4082 (P) - ASTM B210  
**Marking/Marquage:** (12) - 2.000" OD X0.125" WALL - HEAT LOT NO. 1402994 - ALUNNA ORDER CONF. NO. 62126/100 - CPB 300

**Lieferung:** pcs. lbs **Country of Manufacture: Germany**  
**Delivered Material / Matériel délivré:** 34 348

## 1. Chemische Analyse Chemical Analysis / analyse chimique

	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Zr	Bi	Sn	Ni	Na
Charge/ min.	0,40		0,15		0,8	0,04								
Cast No. max.	0,8	0,7	0,40	0,15	1,2	0,35	0,25	0,15						
5625-2/16	0,702	0,356	0,231	0,129	0,955	0,277	0,044	0,037	0,001	0,0360	0,0094	0,0010	0,0058	0,0001

**Hydrogen content:** 0,11 **ccm/100 g Al** Elements without indication < 0,01 % **country of melt manufacturer: Germany**

Products are in accordance with applicable RoHS

FAR-BAA:	Cannot certify compliance
DFARS BAA:	Complies
FAR TAA:	Cannot certify compliance



### Ergebnis der Prüfungen:

Es wird bestätigt, daß das Material geprüft wurde und den Vereinbarungen bei der Bestellannahme entspricht  
 We confirm that the material has been tested and applies to the agreements made on receipt of the order  
 Nous confirmons que le matériel a été contrôlé et correspond avec les conventions faites à la réception de la commande

**Test results:**

**Resultats:**

18.10.2016



Zertifiziert nach DIN EN ISO 9001:2008 und DIN EN 9100:2009  
 gültig bis 2016-11-10  
 Zertifikat- Register- Nr.: 001959 QM08; 001959 ASH 09-1  
 Aluminiumwerk Unna AG, Uelzener Weg 36, 59425 Unna, Germany

released by  
 Drexler

Electronically Generated Certificate - Valid without signature

# Abnahmeprüfzeugnis 3.1 - DIN EN 10204:2005



Inspection Certificate 3.1 - DIN EN 10204:2005 / Certificat de Reception 3.1- DIN EN 10204:2005

**Kunde:**

TW Metals (PA)

**Client:**

760 Constitution Drive P.O. Box 644  
19341 - 06 EXTON, PA USA

**Zeugnisnummer:**

1455/16

**Cert No. / No. du certificat:****Bestellnummer:**

M 49357071

**Order No. / No. de commande**

**ALUnna Auftragsbest.-Nr:** 62126/100

**ALUnna Order Conf.No.:****Kennzeichnung****Marking/Marquage:**

ALUnna - Cert No. 1455/16 - 6061-T6 - CAST NO. 5625-2- WW-T-700/6(F) - AMS-WW-T-700/6 (C) - AMS 4082 (P) - ASTM B210 (12) - 2.000" OD X0.125" WALL - HEAT LOT NO. 1402994 - ALUNNA ORDER CONF. NO. 62126/100 - CPB 300

**Lieferung****Delivered Material / Matériel délivré:**

pcs.

34

lbs

348

**Country of Manufacture: Germany**

## 2. Mechanische Eigenschaften

## Mechanical Properties / Valeurs Mécaniques

Anforderungen Requirements	tensile (Rm) ksi	yield (Rp0,2) ksi	elongation 2" %	elongation A %	Hardness HB	Heat Lot No.
	42,0	35,0	10,0			
1	45,977	38,290	18,1			1402994
2	45,397	37,275	18,1			

**Ergebnis der  
Prüfungen:****Test results:****Resultats:**

18.10.2016

Es wird bestätigt, daß das Material geprüft wurde und den Vereinbarungen bei der Bestellannahme entspricht  
We confirm that the material has been tested and applies to the agreements made on receipt of the order  
Nous confirmons que le matériel a été contrôlée et correspond avec les conventions faites à la réception de la commande



Zertifiziert nach DIN EN ISO 9001:2008 und DIN EN 9100:2009

gültig bis 2016-11-10

Zertifikat- Register- Nr.: 001959 QM08; 001959 ASH 09-1

Aluminiumwerk Unna AG, Uelzener Weg 36, 59425 Unna, Germany

released by

Drexler

Electronically Generated Certificate - Valid without signature

# MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M6061 T6 T2, 000 W 0125

PO / BATCH NO: P035541 / M137091

DATE: 17-03-21

MATERIAL CERT REC'D: Yes

THICKNESS ORDERED: 2.000 X .0125

QUANTITY RECEIVED: 2 X 12'

THICKNESS RECEIVED: 2.000 X .0125

QUANTITY INSPECTED: 2 X 12'

SHEET SIZE ORDERED: Ø

QUANTITY REJECTED: Ø

SHEET SIZE RECEIVED: Ø

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="checkbox"/> N	
CORRECT FINISH	<input checked="" type="checkbox"/> Y N	
CORROSION	Y <input checked="" type="checkbox"/> N	
CORRECT GRAIN DIRECTION	<input checked="" type="checkbox"/> Y N	
CORRECT MATERIAL	<input checked="" type="checkbox"/> Y N	
CORRECT THICKNESS	<input checked="" type="checkbox"/> Y N	
PHOTO REQUIRED	Y <input checked="" type="checkbox"/> N	
CORRECT MATERIAL	<input checked="" type="checkbox"/> Y N	
CORRECT REF # TO LINK CERT	<input checked="" type="checkbox"/> Y N	
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="checkbox"/> Y N	<u>H:1402984</u>
CORRECT M# ON THE MATERIAL	<input checked="" type="checkbox"/> Y N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y N	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW				
TYPE OF MATERIAL	HRC	HRB	DUR A	DUR D
SIZE OF TEST SAMPLE				
HARDNESS / DUROMETER READING				

*testers located in the Quality Office*

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>38</u> DATE: <u>MAR 21 2017</u>	SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



# MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M6061T6TO.500W.058  
 DATE: 17-03-21

PO / BATCH NO: P035541 / M137091

MATERIAL CERT REC'D: Yes  
 QUANTITY RECEIVED: 10x12'  
 QUANTITY INSPECTED: 10x12'  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 1.500x.058  
 THICKNESS RECEIVED: 1.500x.058  
 SHEET SIZE ORDERED: 0  
 SHEET SIZE RECEIVED: 0

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	<input checked="" type="checkbox"/>	
CORRECT FINISH	<input checked="" type="checkbox"/>	N	
CORROSION	Y	<input checked="" type="checkbox"/>	
CORRECT GRAIN DIRECTION	<input checked="" type="checkbox"/>	N	
CORRECT MATERIAL	<input checked="" type="checkbox"/>	N	
CORRECT THICKNESS	<input checked="" type="checkbox"/>	N	
PHOTO REQUIRED	Y	<input checked="" type="checkbox"/>	
CORRECT MATERIAL	<input checked="" type="checkbox"/>	N	
CORRECT REF # TO LINK CERT	<input checked="" type="checkbox"/>	N	
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="checkbox"/>	N	H: 35361464
CORRECT M# ON THE MATERIAL	<input checked="" type="checkbox"/>	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	N	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW				
TYPE OF MATERIAL	HRC	HRB	DUR A	DUR D
SIZE OF TEST SAMPLE				
HARDNESS / DUROMETER READING				

testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>DAS 38</u> DATE: <u>MAR 21 2017</u>	SIGNED OFF BY: _____ DATE: _____	

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

# MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M4130NTO.750W.049

PO / BATCH NO: P035541 / M137091

DATE: 17-03-21

MATERIAL CERT REC'D: Yes  
 QUANTITY RECEIVED: 1x20'  
 QUANTITY INSPECTED: 1x20'  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: .750x.049  
 THICKNESS RECEIVED: .750x.049  
 SHEET SIZE ORDERED: 0  
 SHEET SIZE RECEIVED: 0

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	<input checked="" type="checkbox"/>	
CORRECT FINISH	<input checked="" type="checkbox"/>	N	
CORROSION	Y	<input checked="" type="checkbox"/>	
CORRECT GRAIN DIRECTION	<input checked="" type="checkbox"/>	N	
CORRECT MATERIAL	<input checked="" type="checkbox"/>	N	
CORRECT THICKNESS	<input checked="" type="checkbox"/>	N	
PHOTO REQUIRED	Y	<input checked="" type="checkbox"/>	
CORRECT MATERIAL	<input checked="" type="checkbox"/>	N	
CORRECT REF # TO LINK CERT	<input checked="" type="checkbox"/>	N	
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="checkbox"/>	N	#: 598618
CORRECT M# ON THE MATERIAL	<input checked="" type="checkbox"/>	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	N	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DUR A	DUR D	

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>38</u> <u>9-89</u> DATE: <u>MAR 21 2017</u>	SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

# MATERIAL RECEIPT INSPECTION FORM

MATERIAL: H304TR1,000W,065  
 DATE: 17-03-21

PO / BATCH NO: 70 35541 / 14137091

MATERIAL CERT REC'D: Yes  
 QUANTITY RECEIVED: 2x20'  
 QUANTITY INSPECTED: 1x20'  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 1.000X.065  
 THICKNESS RECEIVED: 1.000X.065  
 SHEET SIZE ORDERED: B  
 SHEET SIZE RECEIVED: 0

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	<input checked="" type="checkbox"/>	
CORRECT FINISH	<input checked="" type="checkbox"/>	N	
CORROSION	Y	<input checked="" type="checkbox"/>	
CORRECT GRAIN DIRECTION	<input checked="" type="checkbox"/>	N	
CORRECT MATERIAL	<input checked="" type="checkbox"/>	N	
CORRECT THICKNESS	<input checked="" type="checkbox"/>	N	
PHOTO REQUIRED	Y	<input checked="" type="checkbox"/>	
CORRECT MATERIAL	<input checked="" type="checkbox"/>	N	
CORRECT REF # TO LINK CERT	<input checked="" type="checkbox"/>	N	
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="checkbox"/>	N	<u>H: YX1606644</u>
CORRECT M# ON THE MATERIAL	<input checked="" type="checkbox"/>	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	N	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW				
TYPE OF MATERIAL	HRC	HRB	DUR A	DUR D
SIZE OF TEST SAMPLE				
HARDNESS / DUROMETER READING				

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>38 9-89</u> DATE: <u>MAR 21 2017</u>	SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

# MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M304TR6.750W.049

PO / BATCH NO: PO 35541 / M137091

DATE: 17-03-21

MATERIAL CERT REC'D: Yes  
 QUANTITY RECEIVED: 4x20'  
 QUANTITY INSPECTED: 4x20'  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: .750x.049  
 THICKNESS RECEIVED: .750x.049  
 SHEET SIZE ORDERED: 0  
 SHEET SIZE RECEIVED: 0

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	<input checked="" type="radio"/> N	
CORRECT FINISH	<input checked="" type="radio"/> Y	N	
CORROSION	Y	<input checked="" type="radio"/> N	
CORRECT GRAIN DIRECTION	<input checked="" type="radio"/> Y	N	
CORRECT MATERIAL	<input checked="" type="radio"/> Y	N	
CORRECT THICKNESS	<input checked="" type="radio"/> Y	N	
PHOTO REQUIRED	Y	<input checked="" type="radio"/> N	
CORRECT MATERIAL	<input checked="" type="radio"/> Y	N	
CORRECT REF # TO LINK CERT	<input checked="" type="radio"/> Y	N	
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="radio"/> Y	N	<u>H1 YX1501783</u>
CORRECT M# ON THE MATERIAL	<input checked="" type="radio"/> Y	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	N	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW				
TYPE OF MATERIAL	HRC	HRB	DUR A	DUR D
SIZE OF TEST SAMPLE				
HARDNESS / DUROMETER READING				

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>38</u> DATE: <u>MAR 21 2017</u>	SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

# MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M304TR0, 500x.049  
 DATE: 17-03-21

PO / BATCH NO: PO 35541 / M137091

MATERIAL CERT REC'D: Yes  
 QUANTITY RECEIVED: 1 x 20'  
 QUANTITY INSPECTED: 1 x 20'  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 1,500x.049  
 THICKNESS RECEIVED: 1,500x.049  
 SHEET SIZE ORDERED: 0  
 SHEET SIZE RECEIVED: 0

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	<input checked="" type="checkbox"/> N	
CORRECT FINISH	<input checked="" type="checkbox"/> Y	N	
CORROSION	Y	<input checked="" type="checkbox"/> N	
CORRECT GRAIN DIRECTION	<input checked="" type="checkbox"/> Y	N	
CORRECT MATERIAL	<input checked="" type="checkbox"/> Y	N	
CORRECT THICKNESS	<input checked="" type="checkbox"/> Y	N	
PHOTO REQUIRED	Y	<input checked="" type="checkbox"/> N	
CORRECT MATERIAL	<input checked="" type="checkbox"/> Y	N	
CORRECT REF # TO LINK CERT	<input checked="" type="checkbox"/> Y	N	
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="checkbox"/> Y	N	<u>XY1506712</u>
CORRECT M# ON THE MATERIAL	<input checked="" type="checkbox"/> Y	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	N	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW				
TYPE OF MATERIAL	HRC	HRB	DUR A	DUR D
SIZE OF TEST SAMPLE				
HARDNESS / DUROMETER READING				

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>38</u> DATE: <u>MAR 21 2017</u>	SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID PO35541

Purchase Order Date 3/9/2017

PO Print Date 3/9/2017

Page Number 1 of 4

Order From :

TW METALS  
PO BOX 933014  
ALTANTA, GA 31193-3014  
US

VU-TWM001

Ship To : DART AEROSPACE LTD

1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

E-MAILED  
MAR 09 2017

Contact Name  
Vendor Phone 585 768 5600  
  
Ship To Contact  
Ship To Phone  
Ship Via: YRC COLLECT  
Ship Acct:

Buyer Chantal Lavoie  
Customer POID  
Customer Tax # 10127-2607  
Terms Net 30  
Currency USD  
FOB FCA - (Free Carrier)

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	M304TR0.500W.035	304 RD Tube .500 x .035W	3/17/2017 Yes 3/17/2017		60.00 f	\$1.50	\$90.00
MATERIAL: AISI 304/316 SA SEAMLESS ROUND TUBING AS PER ASTM A213 OR AMSE SA213 OR ASTM A269							
Line Total:							\$90.00
2	M304TR0.500W.049	304 RD Tube .500 x .049W	3/17/2017 Yes 3/17/2017		20.00 f	\$2.80	\$56.00
MATERIAL: AISI 304/316 SA SEAMLESS ROUND TUBING AS PER ASTM A213 OR AMSE SA213 OR ASTM A269							
Line Total:							\$56.00
3	M304TR0.750W.049	304 RD Tube .750 x .049W	3/17/2017 Yes 3/17/2017		80.00 f	\$2.10	\$168.00
MATERIAL: AISI 304/316 SA SEAMLESS ROUND TUBING AS PER ASTM A213 OR AMSE SA213 OR ASTM A269							

Note:

3/9/2017



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID PO35541

Purchase Order Date 3/9/2017

PO Print Date 3/9/2017

Page Number 2 of 4

Order From :  
TW METALS  
PO BOX 933014  
ALTANTA, GA 31193-3014  
US

VU-TWM001

Ship To : DART AEROSPACE LTD  
1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

Contact Name  
Vendor Phone 585 768 5600

Buyer Chantal Lavoie  
Customer POID  
Customer Tax # 10127-2607  
Terms Net 30  
Currency USD  
FOB FCA - (Free Carrier)

Ship To Contact  
Ship To Phone  
Ship Via: YRC COLLECT  
Ship Acct:

4 M304TRI.000W.065 ✓ 304 RD Tube 1.00 x .065W ✓ 3/17/2017  
Yes  
3/17/2017

20.00 ✓ \$3.20 ✓ \$64.00

Line Total: \$168.00

MATERIAL: AISI 304/316 SA SEAMLESS ROUND TUBING  
AS PER ASTM A213 OR AMSE SA213 OR ASTM A269

5 M4130NT0.750W.049 ✓ 4130 RD Tube .750 x.049W ✓ 3/17/2017  
Yes  
3/17/2017

20.00 \$6.00 \$120.00

Line Total: \$64.00

MATERIAL: AISI 4130N SEAMLESS STEEL TUBING  
AS PER MIL-T-6736 OR AMS 6371/6360/6361  
6362/6373/6374

23.917

SP1703-20

Line Total: \$120.00

Note:

3/9/2017



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID PO35541

Purchase Order Date 3/9/2017

PO Print Date 3/9/2017

Page Number 3 of 4

**Order From :**

TW METALS  
PO BOX 933014  
ALTANTA, GA 31193-3014  
US

VU-TWM001

**Ship To :** DART AEROSPACE LTD

1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

**Contact Name**

**Vendor Phone** 585 768 5600

**Ship To Contact**

**Ship To Phone**

**Ship Via:** YRC COLLECT

**Ship Acct:**

**Buyer**

Chantal Lavoie

**Customer POID**

**Customer Tax #** 10127-2607

**Terms**

Net 30

**Currency**

USD

**FOB**

FCA - (Free Carrier)

6	M6061T6T0.500W.058	6061-T6 RD Tube .500 x.058W	3/17/2017	120.00	\$1.75	\$210.00
			Yes	f		
			3/17/2017			

MATERIAL: 6061-T6/T62/T6510/T6511 SEAMLESS TUBING  
AS PER WW-T-700/6 OR QQ-A-200/8 OR QQ-A-225/8 OR  
AMS 4080 OR AMS 4082 OR AMS 4083 OR ASTM B210 OR  
ASTM B241

**Line Total:** \$210.00

7	M6061T6T2.00W0.125	6061T6 RD TUBE 2.00 X.125W	3/17/2017	20.00	\$8.50	\$170.00
			Yes	f		
			3/17/2017			

MATERIAL: 6061-T6/T62/T6510/T6511 SEAMLESS TUBING  
AS PER WW-T-700/6 OR QQ-A-200/8 OR QQ-A-225/8 OR  
AMS 4080 OR AMS 4082 OR AMS 4083 OR ASTM B210 OR  
ASTM B241

**Line Total:** \$170.00

**Note:**

3/9/2017

24 f.  
SP1703-20





Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID PO35541

Purchase Order Date 3/9/2017

PO Print Date 3/9/2017

Page Number 4 of 4

**Order From :**

TW METALS  
PO BOX 933014  
ALTANTA, GA 31193-3014  
US

VU-TWM001

**Ship To :** DART AEROSPACE LTD

1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

**Contact Name**

**Vendor Phone** 585 768 5600

**Ship To Contact**

**Ship To Phone**

**Ship Via:** YRC COLLECT

**Ship Acct:**

**Buyer**

Chantal Lavoie

**Customer POID**

**Customer Tax #**

10127-2607

**Terms**

Net 30

**Currency**

USD

**FOB**

FCA - (Free Carrier)

8 71401-45

PROCUREMENT  
QUALITY CLAUSES

3/17/2017

1.00

\$0.00

\$0.00

No

3/17/2017

**Procurement Quality Clauses**

A005 right of entry

A012 chemical and physical test report

A016 personnel qualification

A017 raw material identification

A026 certification of material conformance

A041 quality management system

A042 dart notification by supplier

A043 retention of quality documents

SP17-03-17

**Line Total:**

\$0.00

**PO Total:**

\$878.00

**Note:** Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit [www.dartaerospace.com](http://www.dartaerospace.com) for further explanation.

Change Nbr:

2

Change Date:

3/9/2017